

**Meeting of the Central Valley Flood Protection Board
December 3, 2010
Staff Report – Encroachment Permit
City of Bakersfield
Kern River Upland & River Edge Restoration Project, Kern County**

1.0 – ITEM

To consider approval of Permit No. 18628 (Attachment B)

2.0 – APPLICANT

City of Bakersfield, Public Works Department

3.0 – LOCATION

The project is located within the City of Bakersfield, along the south side of the Kern River, between Chester Avenue and Golden State Avenue, within the Kern River Designated Floodway (Kern River, Kern County; Figures 1 and 2, Attachment A).

4.0 – DESCRIPTION

The applicant proposes to construct (1) a 1,330 foot long, 8 foot wide, 4 inch thick PX-300 soil stabilized decomposed granite pedestrian trail; and (2) a 1,630 foot long, 12 foot wide, 4 inch thick decomposed granite with “Natrakil” organic binder equestrian trail; and plant native trees and bushes within the Kern River Designated Floodway (Figures 3 and 4, Attachment A).

5.0 – PROJECT ANALYSIS

Background and Proposed Project Design

The existing site photographs show only a few trees, tumbleweeds and non-native plants now existing on the site (Figures 5 through 8, Attachment A).

The City of Bakersfield’s Kern River Parkway eventually extends pedestrian and equestrian trails along with river restoration up and down the Kern River providing connectivity and enhanced recreation within the community. This proposed project is the first one proposed as part of the City’s overall Kern River Parkway plan.

5.1 – Hydraulic Analysis

The applicant contracted with Meyer Civil Engineering, Inc., (MCE) to perform hydraulic modeling of Kern River flood flows for the existing site condition, and for the existing plus both proposed project condition. MCE used the US Army Corps of Engineers (USACE) HEC-RAS one dimensional (1D) hydraulic model to generate flood flow simulations. The MCE 1D hydraulic model results concluded the installation of the proposed pedestrian and equestrian path along with native trees and bushes will not decrease the flow capacity of the Kern River for this project's river reach.

5.2 – Geotechnical Analysis

No geotechnical investigation was needed for this project because the applicant does not propose to alter any natural area watercourses nor install other flood control features within the Kern River as part of their proposed project.

5.3 – Additional Analysis and Conclusion

The City of Bakersfield has responded to a Board staff request for information related to the establishment of a Long Term Maintenance Plan (LTMP) for the proposed project (Attachment C). Although the responses are specific to Board staff questions related to portions of a long term maintenance plan, the applicant has agreed to a permit condition to formally submit an inclusive LTMP to the Board upon the completion of the project reflecting these responses, City of Bakersfield Parks & Recreation Department park maintenance procedures, and the Kern River Parkway Environmental Impact Report.

Board staff's analysis concludes this proposed project will not have a negative impact to the Kern River Designated Floodway and conforms to Title 23 regulations.

6.0 – AGENCY COMMENTS AND ENDORSEMENTS

The comments and endorsements associated with this project, from all pertinent agencies are shown below:

- The U.S. Army Corps of Engineers 208.10 comment letter has not yet been received for this application located in a non-federal project area. After receipt by Board staff, this letter will be incorporated into the permit as Exhibit A.
- There is no non-federal endorsing agency for this project.

7.0 – CEQA ANALYSIS

Board staff has prepared the following CEQA determination:

The City of Bakersfield, as lead agency under CEQA, approved the project (Kern River Upland and River Edge Restoration Project, SCH No. 2010078192) on July 26, 2010 and determined that the project was categorically exempt under Class 4 (CEQA Guidelines Section 15304 (d)) covering minor alterations to land, water, and vegetation on which result in improvement of habitat for wildlife resources.

The Board, acting as a responsible agency under CEQA, has reviewed the City of Bakersfield's determination and has independently determined that the project is exempt from CEQA Class 4 (CEQA Guidelines Section 15304 (d)) covering minor alterations to land, water, and vegetation on which result in improvement of habitat for wildlife resources.

8.0 – SECTION 8610.5 CONSIDERATIONS

1. Evidence that the Board admits into its record from any party, State or local public agency, or nongovernmental organization with expertise in flood or flood plain management:

The Board will make its decision based on the evidence in the permit application and attachments, this staff report, and any other evidence presented by any individual or group.

2. The best available science that related to the scientific issues presented by the executive officer, legal counsel, the Department or other parties that raise credible scientific issues.

The accepted industry standards for the work proposed under this permit as regulated by Title 23 California Code of Regulations have been applied to the review of this permit.

3. Effects of the decision on the entire State Plan of Flood Control:

There are no effects on the State Plan of Flood Control as the proposed project does not impact the design channel capacity of the Kern River.

4. Effects of reasonable projected future events, including, but not limited to, changes in hydrology, climate, and development within the applicable watershed:

Future events, changes in hydrology and climate may increase flows in the Kern River which in turn would increase the flood risk for the project.

9.0 – STAFF RECOMMENDATION

Staff recommends that the Board determine the project to be exempt from CEQA and to approve the permit.

10.0 – LIST OF ATTACHMENTS

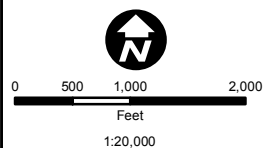
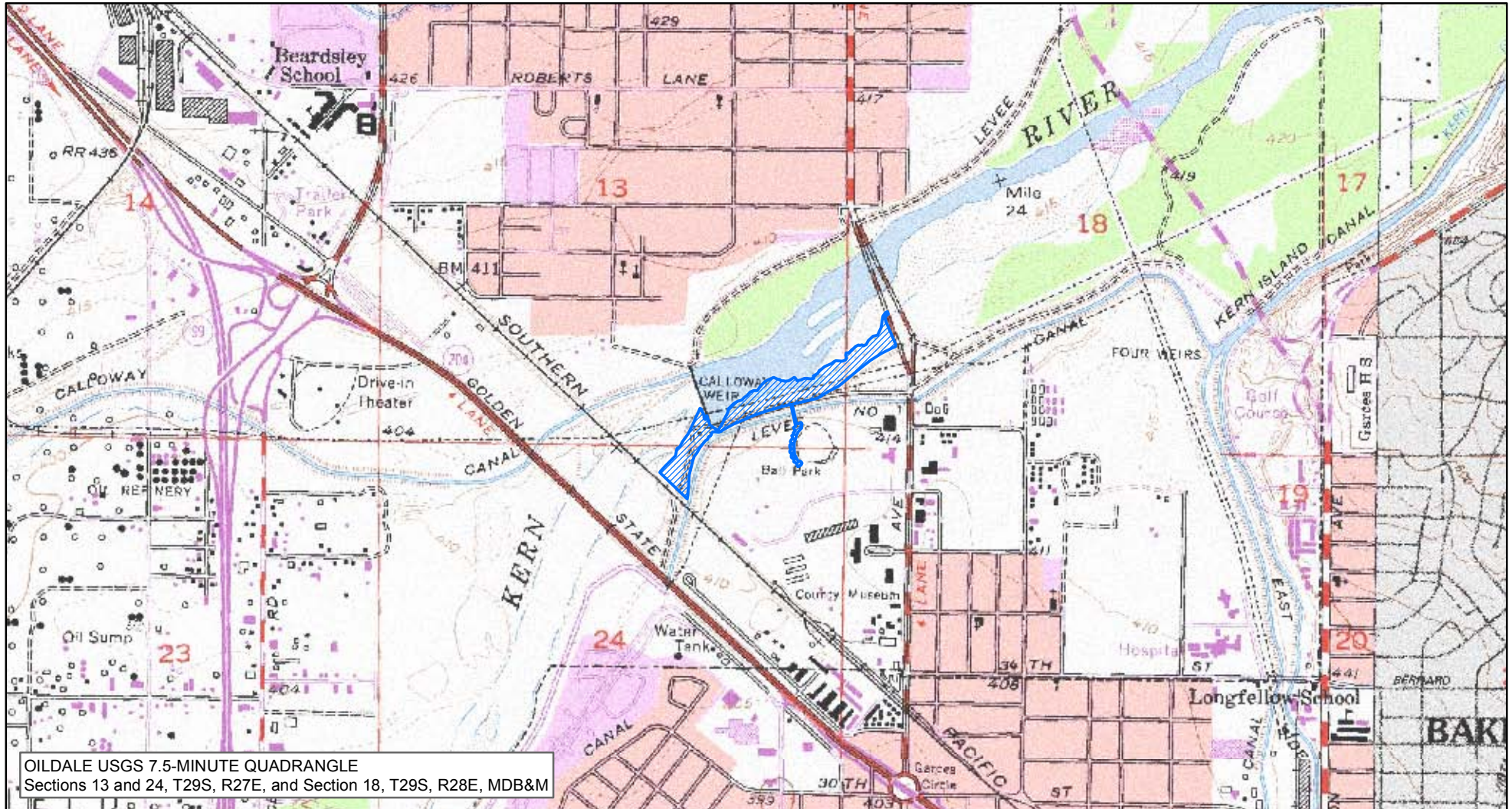
- A. Location Maps and Photos
- B. Draft Permit No. 18628
- C. Draft City of Bakersfield Long Term Maintenance Plan

| | |
|------------------------|-------------------------------------|
| Design/Overall Review: | Jon Tice, P.E. |
| Environmental Review: | James Herota / Andrea Mauro |
| Document Review: | Gary Lemon, P.E. / Len Marino, P.E. |

CITY OF BAKERSFIELD

Kern River Upland and River Edge Restoration Project USGS Topographic Map

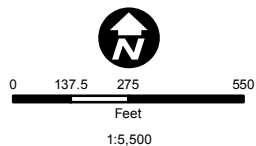
Attachment A



 Project Area (Approximate)


Quad Knopf

Figure 2



 Project Area (Approximate)



THE KERN RIVER UPLAND & RIVER EDGE RESTORATION PROJECT
BAKERSFIELD CALIFORNIA
PRELIMINARY LANDSCAPE PLAN

PROPOSED TREE PALLETTE

- | | | | | |
|-------------------|---|---------------------|-------------------|---|
| ALNUS RHOMBIFOLIA | JUGLANS CALIFORNICA | POPULUS FREMONTII | QUERCUS AGRIFOLIA | SALIX LASIOLEPIS |
| PLATANUS RACEMOSA | LAUREL NOBILIS ARBUTUS UNEDO AESCULUS CALIFORNICA RHUS OVATA | QUERCUS CHRYSOLEPIS | QUERCUS ROBUR | CERCEIS OCCIDENTALIS SAMBUCUS MEXICANA FREMONTODENDRON CALIFORNICUM |



SCALE: 1"=40'-0"
OCTOBER 2nd, 2008

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BIOLOGICAL RESOURCES EVALUATION
KERN RIVER UPLAND AND RIVER EDGE RESTORATION PROJECT



Photo 1: View of the proposed restoration area looking east from the water's edge near the center of the project area.



Photo 2: View of the project site near the shore looking southwest from the eastern portion of the site. A few cottonwoods and willows dot the site.

BIOLOGICAL RESOURCES EVALUATION
KERN RIVER UPLAND AND RIVER EDGE RESTORATION PROJECT

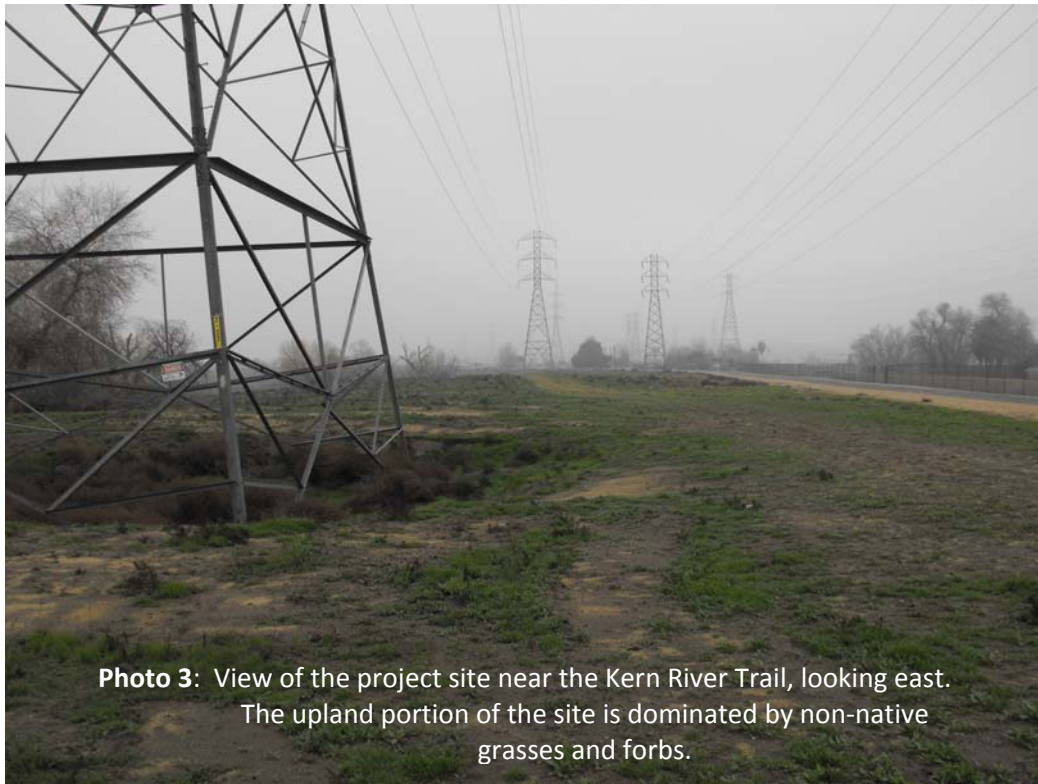


Photo 3: View of the project site near the Kern River Trail, looking east. The upland portion of the site is dominated by non-native grasses and forbs.

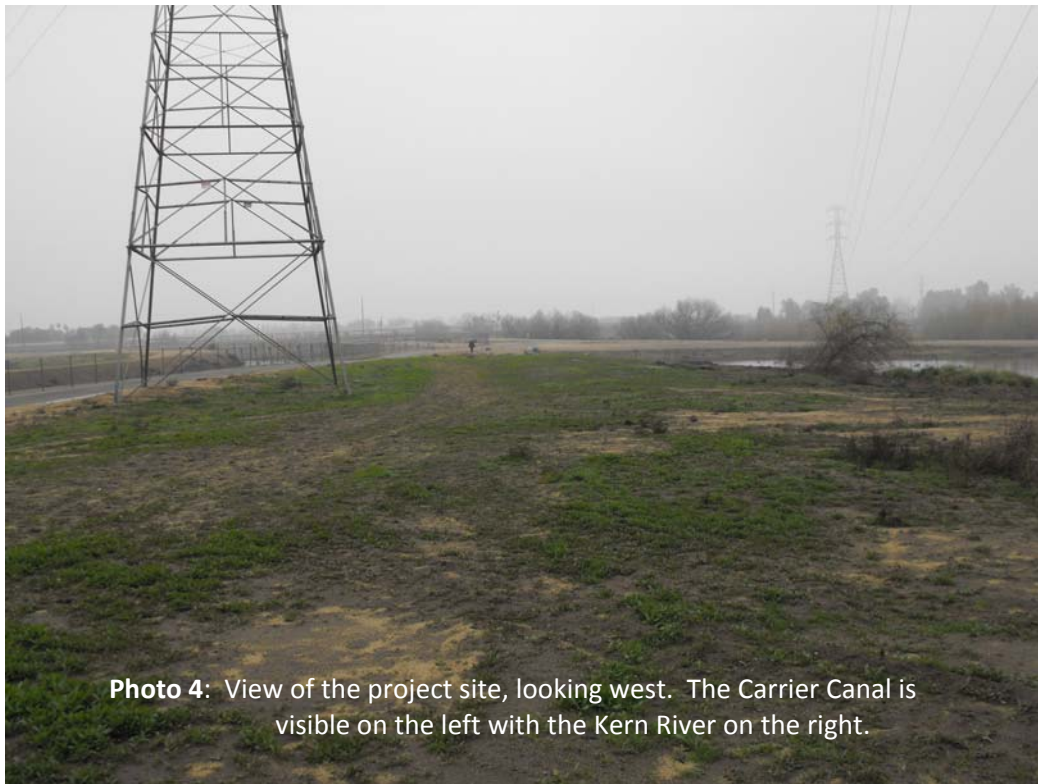


Photo 4: View of the project site, looking west. The Carrier Canal is visible on the left with the Kern River on the right.

BIOLOGICAL RESOURCES EVALUATION
KERN RIVER UPLAND AND RIVER EDGE RESTORATION PROJECT



BIOLOGICAL RESOURCES EVALUATION
KERN RIVER UPLAND AND RIVER EDGE RESTORATION PROJECT



DRAFT

STATE OF CALIFORNIA
THE RESOURCES AGENCY
THE CENTRAL VALLEY FLOOD PROTECTION BOARD

PERMIT NO. 18628 BD

This Permit is issued to:

City of Bakersfield, Public Works Department
1501 Truxtun Avenue
Bakersfield, California 93301

To construct a 1,330-foot-long, 8-foot-wide, 4-inch-thick PX-300 soil stabilized decomposed granite pedestrian trail; construct a 1,630-foot-long, 12-foot-wide, 4-inch-thick decomposed granite with "Natrakil" organic binder equestrian trail; and plant native trees and bushes within the Kern River Designated Floodway. The project is located in Bakersfield between Chester Avenue and Golden State Avenue (Section 13,18&24, T29S, R27E, MDB&M, Kern River, Kern County).

NOTE: Special Conditions have been incorporated herein which may place limitations on and/or require modification of your proposed project as described above.

(SEAL)

Dated: _____

Executive Officer

GENERAL CONDITIONS:

ONE: This permit is issued under the provisions of Sections 8700 – 8723 of the Water Code.

TWO: Only work described in the subject application is authorized hereby.

THREE: This permit does not grant a right to use or construct works on land owned by the Sacramento and San Joaquin Drainage District or on any other land.

FOUR: The approved work shall be accomplished under the direction and supervision of the State Department of Water Resources, and the permittee shall conform to all requirements of the Department and The Central Valley Flood Protection Board.

FIVE: Unless the work herein contemplated shall have been commenced within one year after issuance of this permit, the Board reserves the right to change any conditions in this permit as may be consistent with current flood control standards and policies of The Central Valley Flood Protection Board.

SIX: This permit shall remain in effect until revoked. In the event any conditions in this permit are not complied with, it may be revoked on 15 days' notice.

SEVEN: It is understood and agreed to by the permittee that the start of any work under this permit shall constitute an acceptance of the conditions in this permit and an agreement to perform work in accordance therewith.

EIGHT: This permit does not establish any precedent with respect to any other application received by The Central Valley Flood Protection Board.

NINE: The permittee shall, when required by law, secure the written order or consent from all other public agencies having jurisdiction.

TEN: The permittee is responsible for all personal liability and property damage which may arise out of failure on the permittee's part to perform the obligations under this permit. If any claim of liability is made against the State of California, or any departments thereof, the United States of America, a local district or other maintaining agencies and the officers, agents or employees thereof, the permittee shall defend and shall hold each of them harmless from each claim.

ELEVEN: The permittee shall exercise reasonable care to operate and maintain any work authorized herein to preclude injury to or damage to any works necessary to any plan of flood control adopted by the Board or the Legislature, or interfere with the successful execution, functioning or operation of any plan of flood control adopted by the Board or the Legislature.

TWELVE: Should any of the work not conform to the conditions of this permit, the permittee, upon order of The Central Valley Flood Protection Board, shall in the manner prescribed by the Board be responsible for the cost and expense to remove, alter, relocate, or reconstruct all or any part of the work herein approved.

SPECIAL CONDITIONS FOR PERMIT NO. 18628 BD

THIRTEEN: All work approved by this permit shall be in accordance with the submitted drawings and specifications except as modified by special permit conditions herein. No further work, other than that approved by this permit, shall be done in the area without prior approval of the Central Valley Flood Protection Board.

FOURTEEN: The permittee shall operate and maintain the permitted encroachment(s) and the project works within the utilized area in the manner required and as requested by the authorized representative of the Department of Water Resources or any other agency responsible for maintenance. Maintenance may include actions to preserve the integrity of the flood control system under emergency conditions. These actions will be taken at the sole expense of the permittee.

FIFTEEN: The State of California, Central Valley Flood Protection Board and Department of Water Resources shall not be held liable for any damages to the permitted encroachment(s) resulting from the operation of the flood control project or releases of water from storage reservoirs, flood fight, operation, maintenance, inspection, or emergency repair.

SIXTEEN: The permittee may be required, at permittee's cost and expense, to remove, alter, relocate, or reconstruct all or any part of the permitted encroachment(s) if removal, alteration, relocation, or reconstruction is necessary as part of or in conjunction with any present or future flood control plan or project or if damaged by any cause. If the permittee does not comply, the Central Valley Flood Protection Board may remove the encroachment(s) at the permittee's expense.

SEVENTEEN: The permittee shall be responsible for repair of any damages to the Kern River Designated Floodway and other flood control facilities due to construction, operation, or maintenance of the proposed project.

EIGHTEEN: The permittee is responsible for all liability associated with construction, operation, and

maintenance of the permitted facilities and shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California; including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages arising from the project undertaken pursuant to this permit, all to the extent allowed by law. The State expressly reserves the right to supplement or take over its defense, in its sole discretion

NINETEEN: The permittee shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California, including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages related to the Central Valley Flood Protection Board's approval of this permit, including but not limited to claims filed pursuant to the California Environmental Quality Act. The State expressly reserves the right to supplement or take over its defense, in its sole discretion.

TWENTY: Prior to commencement of work, the permittee shall create a photo record documenting the existing site conditions and include associated descriptions of existing floodway conditions. The photo record shall be certified (signed and stamped) by a licensed land surveyor or professional engineer registered in the State of California and submitted to the Central Valley Flood Protection Board within 30 days of beginning the project.

TWENTY-ONE: The permittee shall contact the Department of Water Resources by telephone, (916) 574-0609, and submit the enclosed postcard to schedule a preconstruction conference. Failure to do so at least 10 working days prior to start of work may result in delay of the project.

TWENTY-TWO: No construction work of any kind shall be done during the flood season from November 1st to July 15th without prior approval of the Central Valley Flood Protection Board.

TWENTY-THREE: Temporary staging, stockpiled material, equipment, and temporary buildings shall not remain in the floodway during the flood season from November 1st to July 15th.

TWENTY-FOUR: Cleared trees and brush shall be completely burned or removed from the floodway, and downed trees or brush shall not remain in the floodway during the flood season from November 1 to July 15.

TWENTY-FIVE: Fill material shall be placed only within the area indicated on the approved plans.

TWENTY-SIX: Backfill material shall be placed in 4- to 6-inch layers and compacted to at least the density of the adjacent, firm, undisturbed material.

TWENTY-SEVEN: All debris generated by this project shall be disposed of outside the floodway.

TWENTY-EIGHT: The work area shall be restored to the condition that existed prior to start of work.

TWENTY-NINE: The permittee shall submit as-built drawings to the Department of Water Resources' Flood Project Inspection Section, located at 3310 El Camino Avenue, Room 256, Sacramento, California 95821, upon completion of the project.

THIRTY: The permittee shall submit a Long-Term Management Plan for the permitted project area to the Central Valley Flood Protection Board upon completion of the project.

THIRTY-ONE: No further tree planting or other work, other than that covered by this application, shall be performed in the area without prior approval of the Central Valley Flood Protection Board.

THIRTY-TWO: The landscaping, appurtenances, and maintenance practices shall conform to standards contained in Section 131 of the Central Valley Flood Protection Board's Regulations.

THIRTY-THREE: No wild rose, grape, blackberries, or other bushy thickets shall be propagated or otherwise allowed to grow at this site. Permittee shall promptly remove such vegetation.

THIRTY-FOUR: Areas where plantings are lost to erosion shall not be replanted.

THIRTY-FIVE: In the event that bank erosion injurious to any adopted or future plan of flood control occurs at or adjacent to the permitted encroachment(s), the permittee shall repair the eroded area and propose measures, to be approved by the Central Valley Flood Protection Board, to prevent further erosion.

THIRTY-SIX: The permitted project shall not interfere with the operation and maintenance of the flood control project. If the project is determined by any agency responsible for operation or maintenance of the flood control project to interfere, the permittee shall be required, at permittee's cost and expense, to modify the project under direction of the Central Valley Flood Protection Board or Department of Water Resources. If the permittee does not comply, the Central Valley Flood Protection Board may modify or remove the encroachment(s) at the permittee's expense.

THIRTY-SEVEN: Should the riparian plantings need to be removed, the applicant shall (a) have an acceptable mitigation site available, including property rights, and (b) fund the removal of the project and the plantings of the mitigation site.

THIRTY-EIGHT: If the planted vegetation results in an adverse hydraulic impact, the permittee will provide appropriate mitigation to be approved by the Central Valley Flood Protection Board.

THIRTY-NINE: Any vegetative material, living or dead, that interferes with the successful execution, functioning, maintenance, or operation of the adopted or future plan of flood control must be removed by the permittee at permittee's expense upon request by the Central Valley Flood Protection Board, Department of Water Resources, or local maintaining agency. If the permittee does not remove such vegetation or trees upon request, the Central Valley Flood Protection Board reserves the right to remove such at the permittee's expense.

FORTY: If the project, or any portion thereof, is to be abandoned in the future, the permittee or successor shall abandon the project under direction of the Central Valley Flood Protection Board and Department of Water Resources, at the permittee's or successor's cost and expense.

FORTY-ONE: Any conservation easements established within this project area shall be junior to flowage and maintenance easements within the project limits.

FORTY-TWO: The letter from the Army Corps of Engineers dated _____, is attached to this

permit as Exhibit A and is incorporated by reference.

Permit No. 18628 - Exhibit A

Army Corps Comment Letter

**Central Valley Flood Protection Board
Encroachment Permit Application No.18628**

**City of Bakersfield
Kern River Upland and River Edge Restoration Project**

Per the CVFPB's (Central Valley Flood Protection Board) email dated October 18, 2010, we are providing the follow-up information that you requested for our Encroachment Permit Application No. 18628.

CVFPB Comment 1: Please submit a revised design-level proposed planting plan showing the planting configuration as individual points (not full size trees) in relation to the flow of the channel. Individual position and spacing between plantings needs to be emphasized to assist with our hydraulic analysis. CCR Title 23, Section 131 (6) outlines that spacing between tree rows must be a minimum of 16 feet perpendicular to the overbank flow of the channel.

City's Response to Comment 1: The City has sent you design-level construction drawings for the project showing the planting configuration as individual points. These drawings were sent to you via email on October 19, 2010. We have also verified that the spacing between the large, more substantial species are more than 16-feet. Some of the small bushes and shrubs may be spaced less than 16-feet, but as you indicated in our phone conversation, this is acceptable because these smaller species will not tend to catch debris that would inhibit water flow in the river channel.

CVFPB Comment 2: Board Staff also requests removal of the elderberry (*Sambucus mexicana*) from the planting palette, or provide justification. According to CCR Title 23, Section 131 (3 (c)), Vegetation must not interfere with flood fight, inspection, and maintenance. Once elderberry shrubs are planted, future removal due to flood fight, inspection, and maintenance would be problematic. Elderberry longhorn beetle is a Threatened species with critical habitat (i.e. elderberry shrubs) pursuant to the Endangered Species Act of 1973, as a result provisions for the future removal of elderberry shrubs have not been provided to allow for flood fight, inspection, and maintenance.

City Response to Comment 2: The following species of plants shall replace the Mexican Elderberry (Sambucus Mexicana);

- 1. All Mexican Elderberry located beneath power lines shall be replaced with Western Redbud (Cercis Occidentalis) (15 gal).*

2. The remaining Mexican Elderberry located outside power lines shall be replaced with a 50/50 mix of Oregon Ashe (*Fraxinus latifolia*) (15 gal) and Interior Live Oak (*Quercus Wislizenii*) (15 gal).

CVFPB Comment 3: Submit a Long Term Management Plan (LTMP) for the project site clarifying how the vegetation will be maintained. Specifics to be included in the LTMP include, but are not limited to:

How often (monthly, annually, etc.) will vegetation be maintained;
Who is responsible for the maintenance, from the initial installation stages to beyond the 25 year mark;
Available funding source for maintenance;
Irrigation requirements for establishing plantings;
Methods of installation;
Invasive species control activities; and
Monitoring of plantings and success criteria, if replanting is necessary.

City's Response to Comment 3: Below please find the City's responses regarding their Long Term Management Plan for Kern River Upland Park.

Q. How often (monthly, annually, etc.) will vegetation be maintained;

A. City staff members inspect the site daily during the week. Seasonal staff infrequently monitors the site during the weekend. The irrigation system is checked weekly. Weed and pest abatement is performed monthly or more frequently if necessary. Plant material and ground cover is trimmed seasonally. Trees are trimmed biannually or as necessary due to storm damage or safety concerns. The plant material is watered by an automated irrigation system. The program is updated by staff monthly or for the prevailing weather conditions.

Q. Who is responsible for the maintenance, from the initial installation stages to beyond the 25 year mark;

A. The project contains a one year maintenance period which will be performed by the installation contractor. Upon completion of the one year maintenance period the City of Bakersfield Recreation and Parks Department will be responsible in perpetuity. There is no transfer of ownership from the City to another entity after 25 years as was indicated by the CVFPB to the City during a recent phone call.

Q. Available funding source for maintenance;

A. Project maintenance will be funded from the City of Bakersfield's General Fund.

Q. Irrigation requirements for establishing plantings;

A. The City irrigates using the evapotranspiration rate for the local community. Based on our own weather station the irrigation is adjusted on a regular basis for seasonal watering and out of the ordinary weather conditions .Irrigation requirements will be set to the appropriate target level for individual plants and soil conditions. In the initial growth the plants water demand will be at it's highest. Later as the plant matures and develops a complete root system the irrigation will be reduced.

Q. Methods of installation;

A. City of Bakersfield Public Works and Recreation and Parks Department inspectors are present on the project site at all times during the construction phase. A complete set of construction plans and specifications were developed and approved under the authority of the Public Works Director. See attached Sheets 32 and 39 of the Project construction drawings for irrigation and planting details.

Q. Invasive species control activities;

A. City staff has been trained to identify invasive species for that area. Through the daily and weekly maintenance of the site staff will monitor and report situations as discovered. Once the City is aware of a problem an eradication plan will be developed. Each situation will be handled on a case by case basis to insure the most cost effective and environmentally friendly process is completed.

Q. Monitoring of plantings and success criteria, if replanting is necessary.

A. City maintenance personnel are present on the site daily to remove litter and visually inspect all improvements. The irrigation system is manually operated on a weekly basis with personnel present to identify any necessary repairs. On occasion plants can be lost to vandalism or disease. These plants are generally replaced within a week of identifying in correcting the situation. The new plantings are hand watered if necessary to ensure their survival.

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